assay gene function in progenitor cells of the selected lineage, and/or (ii) to render selected cells more suitable for transplantation.

5. (Amended) A method according to Claim [any of Claims] 1 [to 4] further comprising:-

(iv) introducing into the multipotential cell a second selectable marker that is differentially expressed in cells of a selected sub-lineage compared with its expression in other cells, wherein cells of the selected sub-lineage are formed by differentiation of cells of the selected progenitor lineage; and

(v) when a culture of progenitor cells of the selected lineage has been obtained, allowing or inducing differentiation of the cells and selecting for cells that express the second selectable marker.

6. (Amended) A method according to Claim [any of Claims] 1 [to 5] wherein the selectable marker is introduced into the multipotential cell by targeted integration or random gene trap integration so as to be operatively coupled to a gene that is differentially expressed in progenitor cells of the selected lineage.

7. (Amended) A method according to Claim [any of Claims] 1 [to 5] wherein the selectable marker is introduced into the multipotential cell via random integration of a transgene in which the selectable marker is operatively coupled to a gene that is differentially expressed in progenitor cells of the selected lineage.

8. (Amended) A method according to Claim [any of Claims] 1 [to 7] wherein the multipotential cell is an ES, EG or EC cell and the method comprises forming an embryoid body, or otherwise inducing differentiation of the cells.

10. (Amended) A method according to Claim 8 [or 9] wherein differentiated cells of an embryoid body are dissociated using a protease, such as trypsin.

11. (Amended) A method according to Claim [any of Claims] 1 [to 10], for generating a culture that is purified or enriched in respect of neural progenitors,

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comprising introducing into the multipotential cell a selectable marker that is differentially expressed in neural progenitor cells.

14. (Amended) A method according to Claim [any of Claims] 1 [to 10] for generation of cardiac progenitor cells, wherein the selectable marker is expressed in cells that express the Nkx 2.5 or GATA-4 gene.

15. (Amended) A method according to Claim [any of Claims] 1 [to 10] for generating a culture that is purified on enriched in respect of haematopoietic progenitors.

17. (Amended) A method according to Claim [any of Claims] 1 [to 16] wherein the selectable marker is an antibiotic resistance gene and the method comprises culture in the presence of antibiotic.

22. (Amended) A method according to Claim 20 [or 21] to assay whether the factor has a proliferative, maturation, toxic or protective effect on progenitor cells of the selected lineage.

24. (Amended) A method of preparing a neural progenitor cell or a differentiated progeny thereof for storage, comprising obtaining the cell in a method according to Claim 11 [any of Claims 1 to 17] and freezing the cell in the presence of a cryoprotectant.

25. (Amended) A method of generating purified neurons, comprising obtaining a culture purified in respect of neural progenitors, using the method of Claim [any of Claims] 1 [to 17] wherein the selectable marker is differentially expressed in cells that express a Sox gene, and culturing the progenitors obtained in the presence of medium suitable for differentiation of the progenitor into neurons.

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